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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/829,969	04/11/2001	Kazuhiro Ohnishi	5000.40010X00	8254

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EXAMINER

TRAN, MAI HUONG C

ART UNIT PAPER NUMBER

2818

DATE MAILED: 09/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/829,969

Applicant(s)

OHNISHI ET AL.

Examiner

Mai-Huong Tran

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 9-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 17-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 25-32 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### **Election/Restrictions**

Newly submitted claims 25-32 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The inventions listed as Groups I (claims 1-8 and 17-24), drawn to a semiconductor device with an MOS transistor and the newly submitted claims listed as Groups III, drawn to a semiconductor device with a complementary MOS transistor.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 25-32 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### **Claim Rejections - 35 U.S.C. § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 17-21 are rejected under 35 U.S.C. 103 (a) as being unpatentable over U.S. Patent No. 6,265,297 to Powell in view of the remark.

Regarding to claim 1, Powell discloses a semiconductor device with an MOS transistor, wherein a gate electrode of the MOS transistor is provided as a stacked structure comprising a silicon layer 56, a metal-containing layer 54, a reaction barrier layer 52 and a metallic layer 50 formed in that order beginning with the silicon layer as set forth in cols. 4-6, and fig. 8. Powell does not disclose a metal silicide layer. However, Powell teaches a metal-containing layer 54.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form a metal silicide layer from a metal-containing layer, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Claim 2 is rejected under the same rationale set forth above to claim 1.

Claim 3 is rejected under the same rationale set forth above to claim 1.

Claim 4 is rejected under the same rationale set forth above to claim 1.

Claim 17 is rejected under the same rationale set forth above to claim 1.

Claim 18 is rejected under the same rationale set forth above to claim 1.

Claim 19 is rejected under the same rationale set forth above to claim 1.

Claim 20 is rejected under the same rationale set forth above to claim 1.

Claim 21 is rejected under the same rationale set forth above to claim 1.

Claims 5-8 and 22-24 are rejected under 35 U.S.C. 103 (a) as being unpatentable over U.S. Patent No. 6,265,297 to Powell in view of the remark.

Regarding to claim 5, Powel discloses a semiconductor device with an MOS transistor whose gate electrode is provided as a stacked structure comprising a silicon layer 56 and a metallic layer 50 as the uppermost layer thereof, wherein a metal-containing layer 54 is provided on the silicon layer side 56 and a reaction barrier layer 52 is provided under the metallic layer side 50 between the silicon layer 56 and the metallic layer 50 as set forth in cols. 4-6, and fig. 8. Powel does not disclose a metal silicide layer. However, Powell teaches a metal-containing layer 54.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form a metal silicide layer from a metal-containing layer, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Claim 22 is rejected under the same rationale set forth above to claim 5.


Claim 23 is rejected under the same rationale set forth above to claim 5.

Claim 24 is rejected under the same rationale set forth above to claim 5.

### Conclusion

Any inquiry concerning this communication on earlier communications from the examiner should be directed to Mai-Huong Tran, (703) 305-1958. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:30 PM. The examiner's supervisor, David Nelms can be reached on (703) 308-4910.

The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7724. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

  
Mai-Huong Tran

  
HOAI HO  
PRIMARY EXAMINER